

Obituaries

Dr. Kimball C. Atwood 3d, 71; Woods Hole research biologist

Dr. Kimball C. Atwood 3d, a physician and research biologist at the Woods Hole Marine Biology Laboratory, died of pancreatic cancer Tuesday at his home in Woods Hole. He was 71.

He was born in New York and graduated from the Lincoln School in 1938. He graduated from Columbia University in 1942 and received his medical degree from the New York University college of medicine in 1946. He served an internship at Bellevue Hospital.

By 1948, Dr. Atwood had begun to concentrate on research in genetics, which would become a lifelong pursuit. He and two collaborators would soon demonstrate that there was "periodic selection" in bacteria population and that this was the underlying principle of bacterial population dynamics. It was the first laboratory confirmation of Charles Darwin's theory that selection underlies the process of evolution.

From 1950 to 1958, he was senior biologist at the Oak Ridge National Laboratory in Oak Ridge, Tenn., where he examined the effects of nuclear radiation on genetic material. He conducted experiments at ground zero, the site of detonation, of three above-ground nuclear tests at Yucca Flats, Nev. Those experiments enabled him to predict what further research would find, such as the insight that genes encoded non-protein compounds, and that cells must have a checking and repair system to keep spontaneous mutation rates low.

Dr. Atwood went on to teach human genetics at the University of Chicago for two years and then became head of the microbiology department at the University of Illinois in Urbana. While there, he collaborated with two other scientists in ground-breaking work on nucleic acid hybridization technology, which would come to play a crucial role in today's molecular genetics and biotechnology.

In 1969, Dr. Atwood joined Columbia's college of physicians and surgeons as professor of human ge-

netics and development. His work there produced several papers on the number and location of ribosomal ribonucleic acid, or RNA, genes in various primates.

After retiring to Woods Hole in 1987, Dr. Atwood continued his work at the Marine Biology Laboratory. He had been lecturing and researching there almost every summer since 1949.

He published 75 scientific papers and belonged to several scientific organizations. In 1968, with a Guggenheim Fellowship, Dr. Atwood went to study at the Centre National des Recherches Scientifiques in Gif-sur-Yvette, France. He made it a point to learn French so he might deliver all his lectures in French.

Dr. Atwood also was biological consultant to the National Aeronautics and Space Administration.

In his retirement, Dr. Atwood took up scuba diving and became a master diver in 1987 and the next year, at age 68, a PADI divemaster.

More than most scientists of his generation, he was considered a polymath by his colleagues who regarded him as one of the few 20th-century scientists able to invent the mathematics needed to solve complex problems. He was able to discourse on subjects that ranged from the theory of relativity to the origin of life.

His long study of the natural world had left him with an unsentimental, albeit affectionate, view of the creatures of this earth. He was an atheist and a skeptic. He was a horticulturalist, an expert on snakes, a jazz drummer, and a skilled sailor.

Dr. Atwood leaves his wife, Barbara F. (Drew); two daughters, Barbara J. Atwood-Fukuda of Riverdale, N.Y., and Jane Evelyn Atwood of Paris, France; two sons, Kimball Chase 4th of Newton Centre, and Nathaniel Bradbury of Anchorage; three brothers, John of West Redding, Conn., Charles of Bradenton, Fla., and Frederick of Islip, N.Y.; and two grandsons.

There will be no funeral service. Burial will be private.